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Published:
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODIFIED NUCLEOSIDES FOR TREATMENT OF VIRAL INFECTIONS AND ABNORMAL CELLULAR PROLIFERATION

(57) Abstract: The disclosed invention is a composition for and a method of treating a *Flaviviridae* (including BVDV and HCV), *Orthomyxoviridae* (including Influenza A and B) or *Paramyxoviridae* (including RSV) infection, or conditions related to abnormal cellular proliferation, in a host, including animals, and especially humans, using a nucleoside of general formula (I)-(XXIII) or its pharmaceutically acceptable salt or prodrug. This invention also provides an effective process to quantify the viral load, and in particular BVDV, HCV or West Nile Virus load, in a host, using real-time polymerase chain reaction ("TR-PCR"). Additionally, the invention discloses probe molecules that can fluoresce proportionally to the amount of virus present in a sample.

WO 2002/032920 A3

INTERNATIONAL SEARCH REPORT

Internal Application No
PCT/US 01/46113

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/706 A61K31/7064 A61K31/7068 A61K31/7076 A61P31/12 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, CHEM ABS Data, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 18324 A (LOEB LAWRENCE A ;MULLINS JAMES I (US); UNIV WASHINGTON (US)) 7 May 1998 (1998-05-07) claims 1,10,17,40,41,44,47-49 ---	1,2,41, 44,56, 60,61
X	DATABASE WPI Section Ch, Week 198631 Derwent Publications Ltd., London, GB; Class B03, AN 1986-199712 XP002232023 & JP 61 130299 A (DAIKIN KOGYO KK), 18 June 1986 (1986-06-18) abstract --- -/--	1,2,60, 61

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 February 2003	22 07 2003

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk. Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bazzanini, R

Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 01 60315 A (CHENG YUN XING ;IAF BIOCHEM INT (CA); SIDDIQUI ARSHAD (CA); STORER) 23 August 2001 (2001-08-23) page 4, line 23-32 claims 1-18 ---	1,2,39, 44,54, 60,61
E	WO 02 18404 A (HOFFMANN LA ROCHE) 7 March 2002 (2002-03-07) claims 1,26 ---	1,2,39, 44,54, 60,61
X	LIN, TAI SHUN ET AL: "Synthesis and anticancer activity of various 3'-deoxy pyrimidine nucleoside analogs, and crystal structure of 1-(3-deoxy-.beta.-D-threo-pentofuranosyl)cytosine" JOURNAL OF MEDICINAL CHEMISTRY (1991), 34(2), 693-701, XP001109492 abstract Scheme III (see compounds 22-24) page 696, right-hand column, paragraph 5 -page 697, left-hand column, paragraph 1 page 701, right-hand column, paragraph 4 ---	1
X	LOCKSHIN, ARNOLD ET AL: "Selective cytotoxicity of 5-hydroxyuridine for human colon adenocarcinoma cells" CANCER TREATMENT REPORTS (1985), 69(7-8), 845-9, XP008012570 page 845, left-hand column, paragraph 2 -right-hand column, paragraph 2 page 846, right-hand column, paragraphs 2,3 table 1 page 848, right-hand column, paragraph 3 ---	1
X	DOLLINGER, MALIN R. ET AL: "Analogs of 1-.beta.-D-arabinofuranosylcytosine. Studies on mechamisms of action in Burkitt's cell culture and mouse leukemia, and in vitro deamination studies" BIOCHEMICAL PHARMACOLOGY (1967), 16(4), 689-706, XP008012573 abstract figures 1,2 tables 2,3,6 --- -/--	1

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/46113

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category.°	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HOSHINO, JIRO ET AL: "Suppression of nuclear ADP-ribosyltransferase activity in Ehrlich ascites tumor cells by 5-azacytidine and its analogs" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS (1987), 142(2), 468-7, XP001109488 abstract page 468, paragraph 1 -page 469, paragraph 2 page 472, paragraph 2 page 473, paragraph 2 -----	1

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/46113

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 1,2,39-41,44,54-56 and 61 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2. [X] Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. [ ] As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. [X] No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1, 2, 39-41, 44, 54-56, 60, 61 (all partially)

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Present claims 1,2,44,60 and 61 relate to an extremely large number of possible compounds. In fact, the formula Ia of claim 1 contains so many variables and possible permutations and provisos that a lack of clarity and conciseness within the meaning of Article 6 PCT arises to such an extent as to render a meaningful complete search of the claims impossible.
Moreover, support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.
Furthermore, the initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which parts of the claims may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT). For these reasons, a meaningful search over the whole breadth of the claims is impossible.
Consequently, the search for the first invention has been carried out for those parts of the claims which appear to be supported, disclosed, clear and concise, namely for the compounds of the formula Ia listed in claim 2 wherein the substituent in 5' position (D) is restricted to hydrogen (H), and for the specific compounds of claims 39-41,54-56, with due regard to the general idea underlying the invention.

Remarks:
1) Claim 59 is missing, therefore claims 60 and 61 should be renumbered accordingly.
2) The formulas VIa, VIb and VIc occur twice in claim 6 with different meanings. The second set is considered to represent compounds VIIa, VIIb and VIIc.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1,2,39-41,44,54-56,60,61 (all partially)

   Method for the treatment or prophylaxis of host exhibiting flaviviridae viral infection comprising administering an effective amount of a compound of the general formula I-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

2. Claims: 1,2,39-41,60,61 (all partially)

   Method for the treatment or prophylaxis of host exhibiting Orthomyxoviridae viral infection comprising administering an effective amount of a compound of the general formula I-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

3. Claims: 1,2,39-41,60,61 (all partially)

   Method for the treatment or prophylaxis of host exhibiting Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula I-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

4. Claims: 1,2,39-41,60,61 (all partially)

   Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula I-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

5. Claims: 1,3,42,44,60,61 (partially), 57 (completely)

   Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula I-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

6. Claims: 1,3,42,60,61 (all partially)

   Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula I-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. Claims: 1,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula I-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

8. Claims: 1,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula I-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

9. Claims: 1,4,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula II-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

10. Claims: 1,4,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula II-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

11. Claims: 1,5,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula II-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

12. Claims: 1,5,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula II-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

13. Claims: 1,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula II-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

14. Claims: 1,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation administering an effective amount of a compound of the general formula II-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

15. Claims: 6,7,43,44,60,61 (partially); 58 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula V-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

16. Claims: 6,7,43,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula V-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

17. Claims: 6,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula V-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

18. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula V-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

19. Claims: 6,44,60,61 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula V-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

20. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula V-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

21. Claims: 6,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

22. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

23. Claims: 6,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

24. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

25. Claims: 6,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

26. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

27. Claims: 6,8,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

28. Claims: 6,8,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

29. Claims: 6,9,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

30. Claims: 6,9,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

31. Claims: 6,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting

Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula VII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

32. Claims: 6,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula VII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

33. Claims: 10,11,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

34. Claims: 10,11,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

35. Claims: 10,12,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

36. Claims: 10,12,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

37. Claims: 10,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral

infection comprising administering an effective amount of a compound of the general formula XI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

38. Claims: 10,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

39. Claims: 13,14,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XIII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

40. Claims: 13,14,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

41. Claims: 13,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XIII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

42. Claims: 13,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

43. Claims: 13,15,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a

compound of the general formula XIII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

44. Claims: 13,15,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

45. Claims: 13,16,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XIII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

46. Claims: 13,16,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

47. Claims: 17,18,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XIV, or its beta-L enantiomer or its pharmaceutically acceptable salt.

48. Claims: 17,18,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIV, or its beta-L enantiomer or its pharmaceutically acceptable salt.

49. Claims: 19,20,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XV-a, or its beta-L

enantiomer or its pharmaceutically acceptable salt.

50. Claims: 19,20,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XV-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

51. Claims: 19,21,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XV-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

52. Claims: 19,21,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XV-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

53. Claims: 22,23,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

54. Claims: 22,23,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

55. Claims: 22,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

56. Claims: 22,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

57. Claims: 22,24,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

58. Claims: 22,24,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

59. Claims: 22,25,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

60. Claims: 22,25,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

61. Claims: 22,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-e, or its beta-L enantiomer or its pharmaceutically acceptable salt.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

62. Claims: 22,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-e, or its beta-L enantiomer or its pharmaceutically acceptable salt.

63. Claims: 22,26,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVI-f, or its beta-L enantiomer or its pharmaceutically acceptable salt.

64. Claims: 22,26,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVI-f, or its beta-L enantiomer or its pharmaceutically acceptable salt.

65. Claims: 27,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

66. Claims: 27,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

67. Claims: 27,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

68. Claims: 27,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

69. Claims: 27,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

70. Claims: 27,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

71. Claims: 27,28,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

72. Claims: 27,28,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

73. Claims: 29,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVIII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

74. Claims: 29,60,61 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVIII-a, or its beta-L enantiomer or its pharmaceutically acceptable salt.

75. Claims: 29,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVIII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

76. Claims: 29,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVIII-b, or its beta-L enantiomer or its pharmaceutically acceptable salt.

77. Claims: 29,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVIII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

78. Claims: 29,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVIII-c, or its beta-L enantiomer or its pharmaceutically acceptable salt.

79. Claims: 29,44,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XVIII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

80. Claims: 29,60,61 (all partially)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XVIII-d, or its beta-L enantiomer or its pharmaceutically acceptable salt.

81. Claims: 30,60,61 (partially), 45 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XIX, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in inventions 1-3.

82. Claims: 30,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XIX, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in invention 4.

83. Claims: 31,60,61 (partially), 46 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula as in claim 31, or its beta-L enantiomer or its pharmaceutically acceptable salt.

84. Claims: 31,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula as in claim 31, or its beta-L enantiomer or its pharmaceutically acceptable salt.

85. Claims: 32,60,61 (partially), 47 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XX, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in inventions 1-3.

86. Claims: 32,60,61 (partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XX, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in invention 4.

87. Claims: 33,34,60,61 (partially), 48,49 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XXI, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in inventions 1-3,85.

88. Claims: 33,34,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XXI, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in inventions 4,86.

89. Claims: 35,36,60,61 (partially), 50,51 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XXII, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in inventions 1-3.

90. Claims: 35,36,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XXII, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in invention 4.

91. Claims: 37,38,60,61 (partially), 52,53 (completely)

Method for the treatment or prophylaxis of host exhibiting Flaviviridae, Orthomyxoviridae or Paramyxoviridae viral infection comprising administering an effective amount of a compound of the general formula XXIII, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in invention 15.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

92. Claims: 37,38,60,61 (all partially)

Method for the treatment or prophylaxis of host exhibiting abnormal cellular proliferation comprising administering an effective amount of a compound of the general formula XXIII, or its beta-L enantiomer or its pharmaceutically acceptable salt, as far as not comprised in invention 16.

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Information on patent family members

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